Rapid Response Team

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Implemented November 1, 2006

What is an RRT?

- Small team of critical care experts available to rush to a patient's bedside who shows early signs of deteriorating health.
- Works with the patient's nurse - often preventing serious incidents such as cardiac arrest by intervening at the very first sign of trouble.
- The RRT is distinct from the Code Blue team

What Should I Know About RRT?

Because Every Life is Priceless

Mandatory, Non-optional Program when vital sign criteria met

Why is There an RRT?

- **TAMC is committed to Patient Safety & to Staff Resources - powerful tool giving the bedside provider the ability to get expert help immediately**
- **The Joint Commission 2008 NPSG #16 Effective: 1/2009**

TAMC RRT is Best Practices Model for all Army MEDCOM facilities

TAMC RRT Goals – Call 10 Mins within criteria met, Increase Calls, Reduce Cardiac Incidence, Identify patients at risk with CIS- Essentris Software

Who is on the Team? – Not a Code Blue Team – ICU/PICU Nurse, RT & Physician – 24 hours/7 days – All Inpatient and Outpatient areas in TAMC

Who Can Call? – Any Staff, Patient, or Family Member can Activate RRT

Why & When Should I Call? – Staff Concern or Call Criteria - Activation mandatory for patient vital sign criteria or at request of patient or family

How Do I Call? – Direct Page or Text Page

Teach Each Other about RRT
Support Each Other to Use RRT

Why do we need a rapid response team?

- Institute for Healthcare Improvement
- - 5 Million Lives Campaign
- The Joint Commission
- - 2008 National Patient Safety Goal
- May improve patient outcomes
- May reduce in-hospital expenditures
- May reduce compensable events
- Improvement and staff and patient satisfaction

Data supporting the RRT concept

- Dr. Bellomo et. al. - Observational study - 4 month period prior to RRT implementation compared to 4 months with RRT in place
- Outcomes
  - Respiratory failure. Events: 12 vs. 74, $p < .001$
  - Acute Renal Failure - requiring hemofiltration. Events: 2 vs 27,
  - $p < .001$
  - Cardiac arrest. Events: 11 vs 33, $p < .003$, (66.6% reduction)
  - In-hospital surgical mortality: 37.5% relative risk reduction, $p < .022$ (roughly 22 fewer deaths over 4 month period)
  - Post cardiac arrest bed days $p < .0001$ (2000 post-arrest bed days/yr saved)

SITUATION

- Many suboptimal outcomes are in retrospect predictable and potential preventable
- Failures to intervene were often related to
  - Knowledge or skill deficits: e.g. failure to recognize signs of clinical deterioration
  - Communication breakdown among members of the healthcare team
  - Cultural issues such as, rank structure, GME, physician/nurse hierarchy - may impede effective communication
- The Joint Commission 2008 NPSG Effective 1/2009

#16: Improve recognition and response to changes in a patient's condition.

*#16A: The organization selects a suitable method that enables health care staff members to **directly request additional assistance from a patient's condition** **specially trained individual(s) when the appears to be worsening**. [Critical Access Hospital]*

Institute for Healthcare Improvement

5 Million Lives Campaign – Save lives from harm

Failure to Rescue

Three fundamental problems

- Failure to recognize deteriorating patient condition
- Communication breakdown
- Failure to plan patient's care

Illustrative Case of Failure to Rescue

- 70y.o. male s/p a distal arterial bypass procedure develops acute confusion, and agitation. The surgical resident is called who comes to evaluate the patient in about 15 minutes. He assess the patient as having "sun downing" and rx's Haldol
- The patient becomes more calm but 2 hours later develops a fatal cardiac arrest
- Autopsy and review of his record confirms that his delirium was due to an undiagnosed acute MI

Goals

- **EARLY INTERVENTION in a patient before a cardiac arrest to reduce incidences**
- **PREVENT "Failure to Rescue"**
- **CALL RRT within 10 minutes every time a patient meets call criteria**
- **INCREASE the number of calls to activate the RRT**
- **IDENTIFY patients meeting RRT criteria with CIS-Essentris RRT Dashboard - automated program**

CALL EARLY, CALL OFTEN

Team Structure

- Critical Care team who brings expertise to patient's bedside
- ICU/PICU RN and Respiratory Therapist (ICU Attending Physician available as consultant)
- Coverage 24 hours a day, 7 days a week; All inpatient & outpatient areas in TAMC
- Distinct from the Code Blue team - Code Blue calls should be initiated when the patient is in extremis, or if there is confusion as to call RRT or Code Blue – better to error on the side of caution

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Role

- Assess
- Stabilize
- Assist with communication
- Educate and support
- Assist with transfer, if necessary

Adult RRT Call Criteria

Mandatory, Non-optional Program when vital sign criteria met

Use your 6th Sense - “Patient does not look good” – Does not need to be “sick enough”

Non-judgmental program; No criticism of care prior to call or for calling

For DNR/DNI and Comfort Care patients

Review all Codes for potential RRT Call

Anyone can call

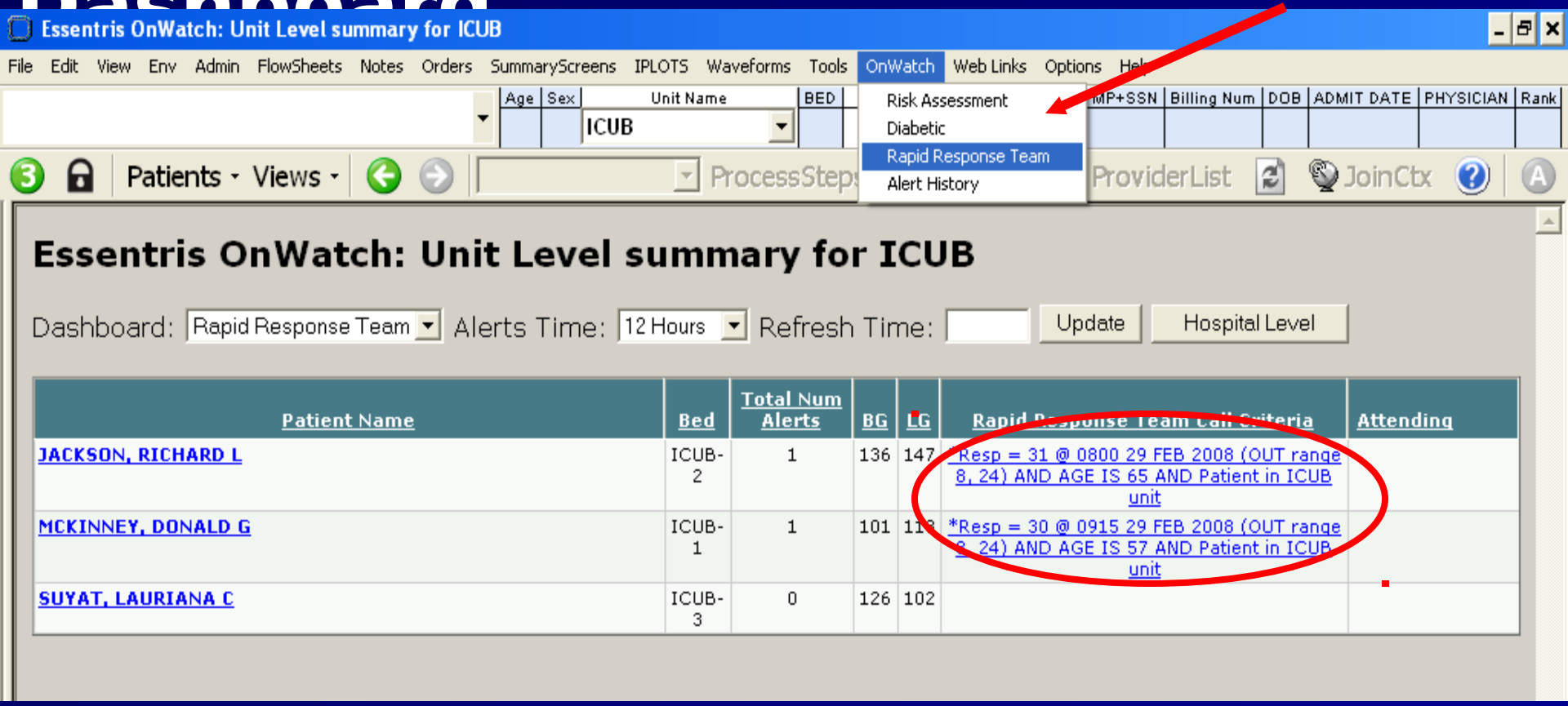
- Resp. rate < 8 and > 28
- Pulse < 40, > 130
- SBP < 90
- Saturation < 90% despite supplemental O2
- Acute change in mental status
- Staff or family worried about patient’s status

Peds RRT Call Criteria

Age	Abnormal HR	Abnormal RR	Abnormal SBP
Neonate	<80 or >200	<20 or >75	<50
Infant (6 months)	<80 or >200	<20 or >75	<60
Toddler (2 yrs)	<65 or >180	<16 or >60	<65
Pre-school (5 yrs)	<50 or >160	>50	<70
School Age (7 yrs)	<50 or >150	>45	<75
Adolescent	<40 or >140	>40	<85

- Saturation < 90% with O2
- Altered Mental Status
- Family or Staff Concern

CIS Essentris OnWatch – RRT Dashboard



- identifies patients whose conditions are in danger of deteriorating, or in clinical decline
- displays information in real-time, allowing staff to quickly assess clinical data, receive early warnings and to notify physicians and the Rapid Response Team

Family Brochure

- All admitted patients receive RRT brochure from PAD
- Aim is to empower patients and families
- Activation is through the health care team, not directly by patient/family

Activating the RRT

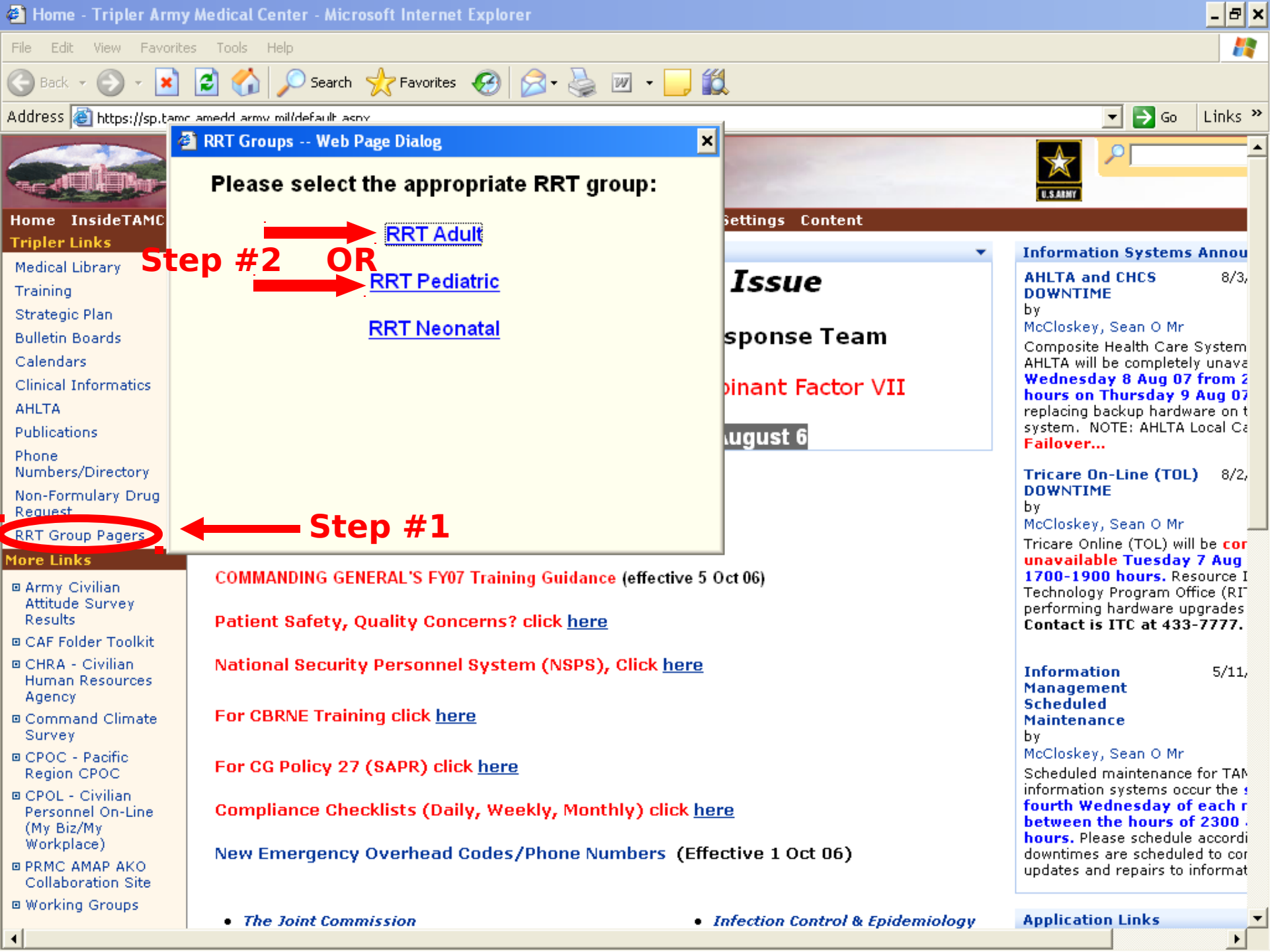
Paging the RRT:

- Enter your phone extension
- Be ready to answer the phone with the patient's location

Text-paging the RRT:

- Enter the patient's location and your phone extension

If no response in 5 minutes, call again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Army Civilian Attitude Survey Results
CAF Folder Toolkit
CHRA - Civilian Human Resources Agency
Command Climate Survey
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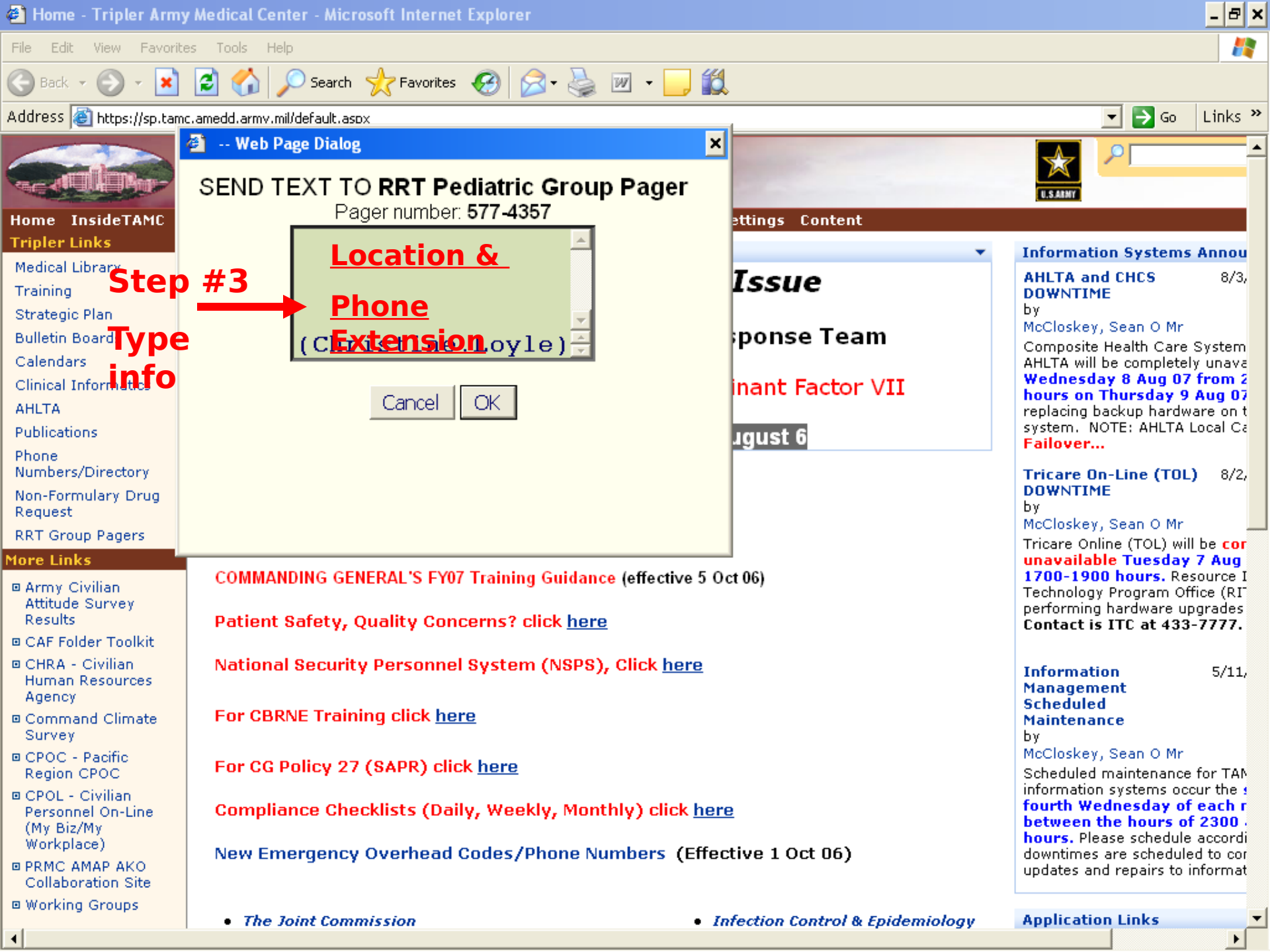
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SBAR

Use the **SBAR** format to explain the clinical situation:

- Situation
- Background
- Assessment
- Recommendation

SBAR Example

- Situation – Mr Smith is 70y.o. with acute shortness of breath and has crackles on exam.
- Background – He had a cholecystectomy yesterday, and has a history of heart failure. He has been receiving fluid at 200cc/hr.
- Assessment – I think he has congestive heart failure.
- Recommendation – I think we should give him some Lasix.

Concerns

Physician Concerns:

Primary team could be marginalized or left "out of the loop"

- **The primary team will be alerted as the RRT is being called**
- **An effective RRT response involves consultation with the attending of record**
- **Staff members should not be dissuaded from calling the RRT when call criteria are met**

Nursing Concerns:

Am I taking an ICU Nurse away from another patients' care?

- **Dedicated RRT ICU Nurse / ICU Bed Manager w/no patients**
- **Staffed and specially funded for RRT**

Case #1

- 50y.o. woman POD #2 after TAH/BSO – She was resting comfortably earlier in the shift but now is complaining of shortness of breath and now is on 6 liters of oxygen by nasal cannula. Respiratory rate is 30 and you are concerned.
- What do you do?
  a. Call the Gyn intern
  b. Hope for the best and observe the patient
  c. Call a Code Blue
  d. Call the Rapid Response team pager (577-0066)
  e. a and d

This patient **meets several criteria for a mandatory call** to the Rapid Response Team and **your concern is valid**. As you pick up the phone, the physician/surgeon arrives and informs you that he/she doesn't need the RRT – "I see this all the time". You should..

a. Salute and get him/her coffee.
b. Tactfully inform him/her that hospital policy is to call the RRT when call criteria are met and it is not optional
c. Cuss and storm off the ward, threatening to quit the Army

Case #2

- You have a 60 y.o. man with a pneumonia. It is the middle of the night you check on him and he is breathing 40 times/min and needs a 100% oxygen facemask. He is no longer responsive
- What do you do?
  a. Call the intern
  b. Call the RRT
  c. Call for a Code Blue

This gentleman is an impending code, and probably needs to be intubated emergently

Patients in extremis, should have a Code Blue called and not an RRT response.

If in doubt, it is better to call a Code Blue than to call the RRT.

Case #3 – Pediatric Ward – 7B1

- A father returned from getting a cup of coffee and discovered that his infant was not breathing well. He is concerned about his child. The child has a history of Down's Syndrome and is post-op day two for a Duhamel procedure (Martin modification) for Hirschsprung's Disease. Normal assessment (abdomen within normal finding s/p pull-through procedure). Vital signs are normal except respiratory rate is 65 and the father is concerned and wants a physician to check his child.
- What do you do?

a. Tell the father everything is ok.
b. Call the Respiratory Therapist.
c. Call a Code Blue
d. Call the PRRT

The **parent's concern is valid** and the patient also **meets the vital sign criteria** to call the PRRT.

Peds RRT will assess the child. If the patient does not need further treatment then the PRRT will follow up with the family approximately 6-12 hours later

Who Has RRT Helped?

- **<u>Young woman s/p vaginal delivery</u>, becomes light headed mild hypotension on ward, staff activates RRT**
- **OB team at bedside**
- **RRT expedites evaluation and transfer (post-partum hemorrhage)**
- **Patient in OR 11 minutes after call initiated. Excellent outcome**

OB retained control and RRT facilitated stabilization and a rapid seamless transfer; Ready availability of an ICU nurse brings advanced nursing expertise to patient, ability to perform bedside lab testing.

Documentation and Feedback

Structured Documentation Tool

- **RRT Call Record and Outcome Forms**
- **RRT Note in CIS - Essentris Medical Record**

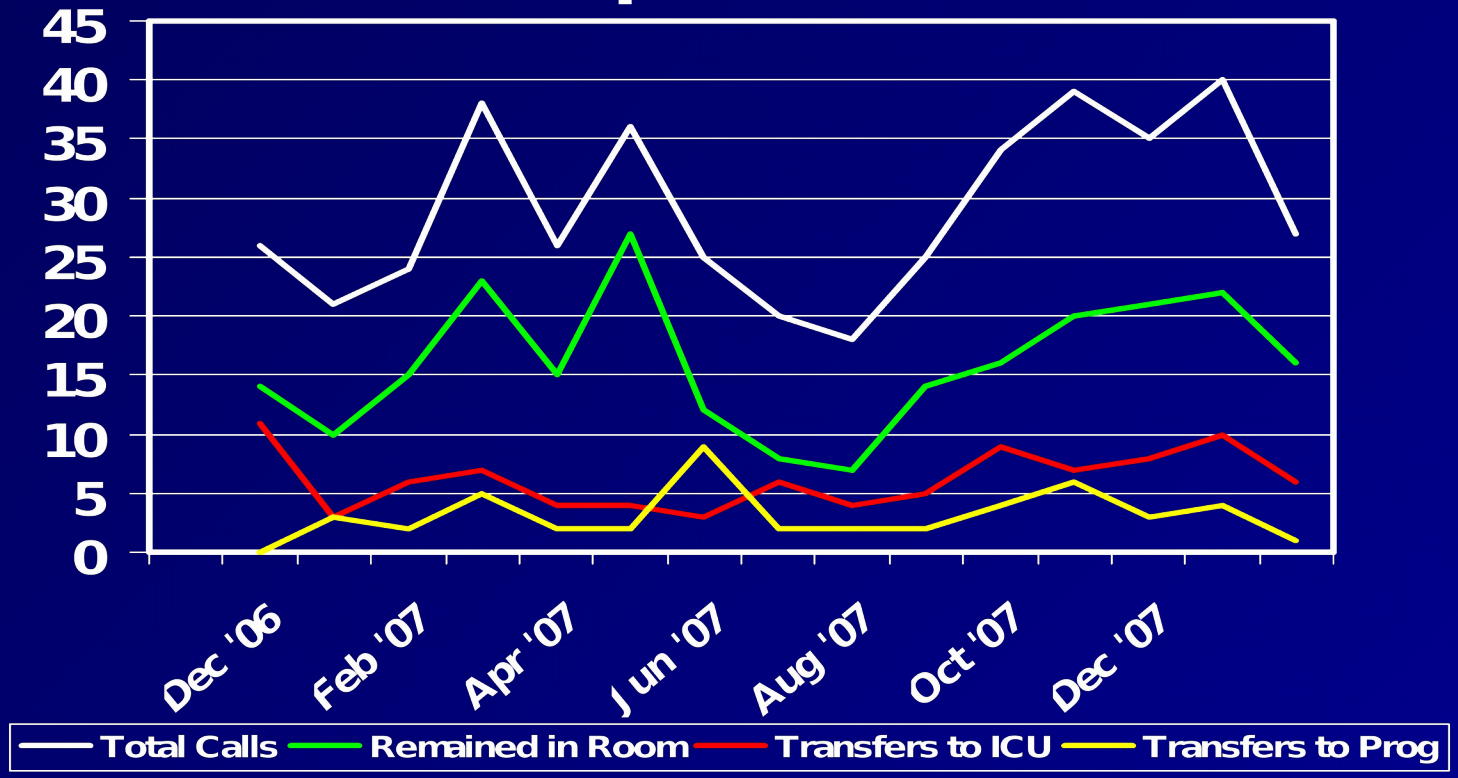
Feedback Mechanisms

- **24 hour RRT Event Process Improvement Review**
- **Patient Follow- up**
- **Survey for Staff activating RRT**
- **Quarterly Newsletter**
- **Intranet Website**

Measure Effectiveness

- **Number of RRT Calls**
- **Total Codes**
- **Mortality Rate**
- **Review all Codes for potential RRT**

Adult RRT
Total Calls/Call Dispositions/Call Locations



Call Volume

- **Adult RRT – Nov ’06 - Jan ’08 Total 434 Calls - Average 29 Calls per Month Anticipate 25 Calls per 1000 Discharges**
- **Pediatric RRT – Aug ’07 - Jan ‘08Total 13 Calls - Average 2+ Calls per Month Anticipate 3 Calls per Month / 1 Call per 10 Beds**

Dispositions - 55% Remain in Rooms, 33% Higher Level of Care, 12% Other outcomes

Call Locations

- **Medicine/Telemetry – 53.4%; Progressive Care – 14.5%; All Other Inpatient Areas – 20.7%**

RRT Staff Activator Survey Results
Nov ’06 – Jan ’08

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The RRT responder responded in a timely manner.	86.4%	11.5%	1.6%	0.5%	
The RRT Responder was professional and courteous	91.1%	8.9%			
The RRT Responder demonstrated competency in assessing the intervening.	89.5%	8.4%	1.6%	0.5%	
The RRT was able to stabilize the patient.	68.4%	19.3%	11.2%	1.1%	
The RRT made a difference in the patient’s care.	71.8%	20.7%	7.5%		
The RRT communicated well staff, family, and patient.	85.3%	13.2%	1.6%		
The RRT responder provided positive feedback for calling.	85.1%	11.7%	2.7%		0.5%
I am more confident in caring for patients because of the RRT.	79.8%	16.0%	3.7%	0.5%	

Statement 1 - 97.9% Strongly Agree & Agree

Statement 2 - 100% Strongly Agree & Agree

Statement 3 - 97.9% Strongly Agree & Agree

Statement 4 - 87.7% Strongly Agree & Agree

Statement 5 - 92.5% Strongly Agree & Agree

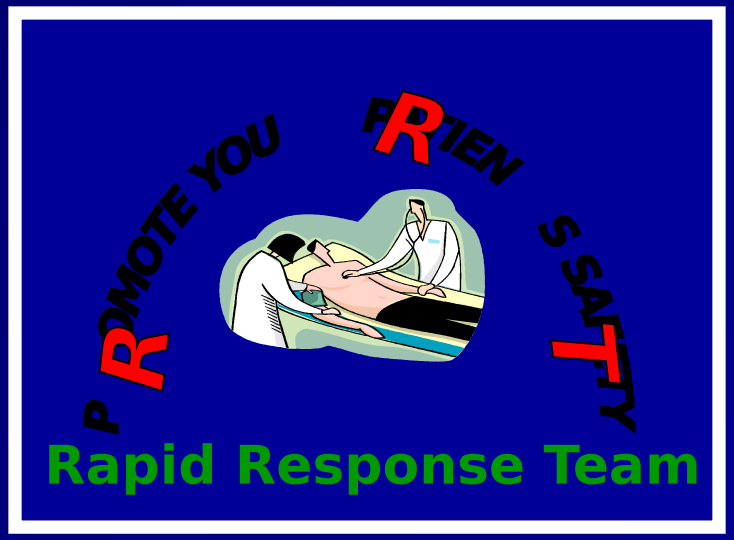
Statement 6 - 98.5% Strongly Agree & Agree

Statement 7 - 96.8% Strongly Agree & Agree

Statement 8 - 95.8% Strongly Agree & Agree

Acknowledgements

We would like to acknowledge
LTC Eric Crawley and LTC Laura Rogers, Ret.
for pioneering the RRT at TAMC



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Because Every Life is Priceless

Questions?